IN THE CLAIMS

Claims 28-52 are currently pending in the subject application. Claims 40-52 are cancelled as indicated below. In accordance with 37 CFR 1.121, a complete listing of the claims is provided.

1. (Previously Cancelled)

2. (Previously Cancelled)

3. (Previously Cancelled)

4. (Previously Cancelled)

5. (Previously Cancelled)

6. (Previously Cancelled)

7. (Previously Cancelled)

8. (Previously Cancelled)

9. (Previously Cancelled)

10. (Previously Cancelled)

11. (Previously Cancelled)

12. (Previously Cancelled)

13. (Previously Cancelled)

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15. (Previously Cancelled)

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20. (Previously Cancelled)

21. (Previously Cancelled)

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23. (Previously Cancelled)

24. (Previously Cancelled)

25. (Previously Cancelled)

26. (Previously Cancelled)

27. (Previously Cancelled)

28. (Currently Pending) A method for determining an emission source, said method comprising the steps of:

measuring concentrations of an emitted material at a single measurement point;

measuring changes in wind velocity over time;

performing spatial temporal analysis of said concentration measurements;

generating one or more wind vectors based on said measured changes in wind velocity;

collating said measured concentrations with said wind vectors to generate an emissions plot; and

defining boundaries for one or more plumes on said emissions plot wherein said one or more plumes are indicative of an emission source.

29. (Currently Pending) The method as claimed in claim 28, wherein said changes in wind velocity are measured independently of said single measurement point.

30. (Currently Pending) The method as claimed in claim 28, wherein said single measurement point comprises a single sensor positioned any distance from a potential emission source.

31. (Currently Pending) The method as claimed in claim 29, further including the step of superimposing a known emission concentration on said sensor during a monitoring cycle, so that sensitivity of said sensor is enhanced.

32. (Currently Pending) A method for determining a source of an emission, said method comprising the steps of:

measuring concentrations of an emission at a single measurement point;

measuring changes in wind velocity over time;

performing spatial temporal analysis of said concentration measurements;

generating one or more wind vectors based on said measured changes in wind velocity;

generating a trajectory for the emission based on said measured emission concentrations and said wind vectors;

projecting back along said trajectory and correlating one or more points along said trajectory as sources of a possible emission; and

validating one of said points as the source of the emission.

33. (Currently Pending) The method as claimed in claim 32, further including the step of generating another trajectory based on emission concentrations measured at another location, and said step of validating comprising taking points in agreement on both of said trajectories.

34. (Currently Pending) The method as claimed in claim 32, wherein said single measurement point comprises a single sensor positioned any distance from a potential emission source.

35. (Currently Pending) The method as claimed in claim 34, further including the step of superimposing a known emission concentration on said sensor during a monitoring cycle, so that sensitivity of said sensor is enhanced.

36. (Currently Pending) A method for determining a source of an emission, said method comprising the steps of:

measuring concentrations of an emission at a single measurement point;

measuring changes in wind velocity over time;

performing spatial temporal analysis of said concentration measurements;

generating one or more wind vectors based on said measured changes in wind velocity;

generating two or more trajectories for the emission based on said measured emission concentrations and said wind vectors;

overlapping said two or more trajectories to provide an area of overlap; and

determining the source of the emission from said overlap area.

37. (Currently Pending) The method as claimed in claim 36, further comprising the step of validating said emission source in said area of overlap.

38. (Currently Pending) The method as claimed in claim 36, wherein said step of measuring concentrations of an emission comprises taking measurements from a sensor that is moving to produce a plurality of measurements at different locations.

39. (Currently Pending) The method as claimed in claim 36, wherein said step of measuring comprises positioning a plurality of sensors in a spaced relation at locations about a facility.

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

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47. (Cancelled)

48. (Cancelled)

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50. (Cancelled)

51. (Cancelled)

52. (Cancelled)